

VI. *An Entomological Excursion to Central Spain.* By
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IN the Transactions of the Entomological Society for 1897, pp. 427-434, Mrs. M. de la Bêche Nicholl has given us an interesting account of her travels in Aragon and Castile, accompanied by a list of the butterflies she met with, and a description of the general features of the places visited. Dr. Chapman and I having journeyed through the same district during the past summer, it is proposed here to supplement Mrs. Nicholl's paper by giving some particulars concerning the Coleoptera and Hemiptera noticed by us, Dr. Chapman having already published various notes on the Lepidoptera. The date of our visit, July 6th to August 10th, though probably the best time for the majority of the Lepidoptera, was, of course, much too late for most of the beetles, the characteristic Longicorn genus *Dorcadion*, and many of the Carabidæ, Malacodermata, Elateridæ, etc., being nearly or quite over, owing to the vegetation on the lower ground being already dried up. Still this was amply compensated for by the discovery of a conspicuous *Buprestis*, not previously recorded from Spain, the abundance of various Lepturids, etc. So far, too, as at present ascertained, the most interesting captures in the Coleoptera, as well as in the Hemiptera-Heteroptera, were made in the lower, hot, arid regions, where the fauna resembles that of Algeria, and not in the pine-forested and more humid mountainous districts, which have a beetle-fauna very similar to that of the Eastern Pyrenees. Some of the species met with in these pine-forests, we had captured at Arcachon, in the Landes, on our way out, as *Melanotus tenebrosus*, *Spondylis buprestoides*, *Monochammus gallo-provincialis*, *Hylotrupes bajulus*, *Magdalis memnonia*, *Buprestis octomaculata*, *Chrysobothrys solieri*, etc. It was a pleasant surprise to me, having previously travelled to the Sierra Nevada and other places in Southern Spain, to find such extensive forests of pine as still clothe the mountains which form the watershed of the rivers Tagus, Jucar and

Guadalaviar, in contrast to the arid, almost treeless regions passed over on our outward and homeward journeys through the country.

Arriving at Madrid on July 6th, where we had the good fortune to meet Señores Bolivar and Uhagon, we devoted the two following days to a visit to the Escorial (where we also met another entomologist, José Hernandez Alvarez, of the Escuela de Montes) and Toledo respectively. Leaving again on the 9th for Cuenca, about nine hours distant by rail, we remained there till the 18th, working daily up the Huecar gorge or valley, or on to the arid hills in the vicinity of the town. This valley was still green enough to afford very good collecting-ground, as, apart from the river, there were springs in various places issuing through the precipitous rocks from the adjacent high ground. The new road in course of construction, however, had to be avoided, it being deep in dust, from the constant passage of the mules dragging down the timber from the distant pine-forests. About six miles up the valley was the village of Palomera, near which we found several productive spots on the banks of the stream, and a few miles above that again, leaving the Huecar for a time, and ascending through scattered pines, a limestone cave on the hill-side was visited, though no beetles were obtained therein. The most noticeable insects seen about Cuenca, exclusive of the numerous butterflies, were a day-flying *Rhizotrogus (pygialis)*, Muls.; several species of *Zonabris*, in abundance, *Leptura (unipunctata)*, F., *Clytanthus*, *Trichodes*, *Anthaxia*, etc., on very spiny plants; various Cetoniidæ, *Lixus*, *Larinus*, etc., on thistles; a *Cerocoma (mühlfeldi)*, Gyll., *Omophlus ruficollis*, F., two species of *Lebia*, etc., on flowers; a curious Anthribid (*Trigonorhinus arcolatus*, Boh.), on shrubs in the evening, etc. Here, too, in the Huecar valley, there were plenty of Pentatomidæ and other Hemiptera, an extremely variable *Eurydema* swarming on certain plants, the most dissimilarly-coloured forms being often seen in copulâ; and two species of *Crioceris* were noticed on the asparagus plants. On the hills, which are clothed in places with many spiny plants, as evidence of a much more abundant fauna to be met with earlier in the season, we found a large *Thylacites (chulcogrammus)*, Boh. in some numbers, a beautiful *Chlorivius (martinezi)*, Ganglb., *Purpuricenus budensis*, Goeze, various *Tentyria*,

Heliopathes, *Aristus*, *Acinopus*, *Steropus*, *Ophonus*, etc. About "stercore humano," only too abundant everywhere on the outskirts of Cuenca, the very local *Akis sansi*, Sol., and a large *Blaps*, were not uncommon. The Jucar river, which is joined by the Huecar in the middle of the city, and down which large numbers of logs are floated, did not look very attractive for collecting, the valley being much barer of vegetation (and we therefore paid but little attention to it) above the town, though we followed the stream down for some distance. Here, *Plagiodera* swarmed on a species of *Salix* and a *Haltica* on poplar, both stripping the trees of their leaves, the destructive *Galerucella lutcata*, Müll., on elm, two species of *Notoxus*, etc. On the sandy banks of the streams about Palomera, *Omophron*, *Acylophorus*, *Pæderus*, *Tachyusa*, *Potaminus*, etc., occurred, and in the water itself various interesting species of *Deronectes*, *Gyrinus*, *Elmis*, *Ochthebius*, and *Parnus*. At Cuenca we were again fortunate enough to meet a young entomologist, Juan Jiménez Cano, and he accompanied us on various excursions. Leaving this place in company with this gentleman, on July 17th, for the first stage of our journey across the mountains of Castile into Aragon, for which a guide and horses were with difficulty procured, we reached Uña, in the vicinity of the lake of that name, the same afternoon passing on our way the curious place known as the "Ciudad Encantada" (Enchanted City), and very interesting from a geological point of view, passing the night in very primitive quarters. Here, in the village, as elsewhere, the widely-distributed and conspicuous Longicorn *Spondylis buprestoides*, L., was noticed quite commonly on the wing towards evening. The district hereabouts, as noted by Mrs. Nicholl, looked very good for entomological work, the slopes of the adjacent hills being clothed with pine-forest, and there being plenty of flowers in the marshy ground round the lake, but as we had decided to go on as soon as possible to Tragacete, we made an early start next morning for that place. This day's journey, which lay through a very hilly, almost uninhabited country, clothed in great part with open pine-forest, was a very fatiguing one, to two of our party at least, one of our guides losing his way for some hours, the right track being regained with difficulty, ten hours in all being spent in the saddle. At Tragacete, where we obtained accommodation in the house of Indalechio Martinez, we remained till July 26th. This

village, which lies in the upper part of the valley of the River Jucar, at an elevation of about 4000 feet, proved to be an excellent centre for work, there being plenty of pine-forest and other suitable ground in the vicinity. Many excursions were made up the Jucar, which descends through a long narrow gorge before reaching Tragacete, sometimes to near its source, amongst the extensive pine-forests, and we never failed to bring back some interesting insects. In the open places, as at Cuenca, there was the usual abundance of *Zonabris*, *Zonitis*, *Cerocoma*, *Trichodes* (four species), *Leptura unipunctata*, *Clytanthus ruficornis*, etc., on *Eryngium* and other spiny flowering plants. Higher up, in the wooded ground, on the Umbelliferæ, etc., various Longicornia were to be found, as *Leptura stragulata*, Germ., and *Strangalia pubescens*, F., both in plenty, and both varying in colour to entirely black, *L. distigma*, Charp. (a beautiful insect alive), *L. sanguinolenta*, L., *Pachyta 4-maculata*, L., and divers species of *Lebia*, *Aemæodera*, *Anthaxia*, *Coræbus*, *Haplocnemus*, *Malachius*, *Mycterus*, *Mordella*, *Chrysanthia*, *Edemera*, etc. On the pine-trees, on which we had the pleasure of first finding the handsome larva of *Graellsia isabellæ*, various beetles were met with, as *Brachyderes suturalis*, Graells, *Scythropus*, *Pissodes*, a pallid *Cryptocephalus* (near *C. pini*, L., but with a smooth thorax), a similarly-coloured *Galerucid*, *Magdalis*, etc. On the pine-timber, or under its bark, we obtained three species of *Buprestis*, *Anthaxia*, *Temnochila*, *Plegaderus*, *Platysoma*, *Paromalus*, *Tachyta nana*, Gyll., *Placusa*, *Menophilus*, *Hypophlæus*, *Hylastes*, *Tomicus*, *Crypturgus*, *Mono-hammus*, *Criocephalus*, *Spondylis*, and others. In dung in the road *Aphodius carpetanus*, Graells (in plenty), *Bubas*, *Copris*, *Emus*, etc., occurred. The wet moss on the stones in the river (here reduced to a narrow stream) harboured *Bembidium ibericum*, Pioch., and an *Ocalca* (in plenty), as well as *Orectochilus* and an *Ancyrophorus*; on the stones themselves, here or elsewhere near Tragacete, were several *Elmis*, *Ochthebius*, *Hydræna*, and *Parnus*; and on the banks, various *Tachyusa*, *Scopæus*, *Pæderus*, *Bembidium*, *Blemus*, *Cryptohypnus*, and *Hydrocyphon*. The old deserted nests of the pine processionary-moth *Thaumatopæa pityocampa*, Schiff., hanging on the upper branches of the pines, when one had pluck enough to handle them, furnished *Dermestes aurichalceus*, Küst., in abundance. In grassy places on the hill-sides, *Meloë majalis*, L., was frequently

to be seen, travelling much more rapidly than most of its congeners, and very snake-like in its movements; here, too, we found *Carabus rugosus*, F., and *C. melancholicus*, F., *Chlanius martinezi*, Ganglb., *Steropus insidiator*, Pioch., various *Harpali* (*zabroides*, Dej., etc.), *Acinopus*, *Aristus*, *Cyrtonus*, *Timarcha*, *Asida*, *Heliopathes*, *Dorcadion*, etc. Leaving Tragacete on July 26th, we worked our way on foot to Guadalaviar, a village close under one of the highest points in the district, the Muela de San Juan, crossing on our way the upper valley of the Tagus and the Portillo de Guadalaviar, the high ridge known under the latter name forming the boundary between Castile and Aragon. All these mountains are clothed with pines to the summit, and none of them are high enough (under 7000 feet) for really alpine forms; nevertheless near the top of this ridge, on the northern side, in some open places amongst the trees, a good many interesting beetles were found under the larger stones which had been cleared away from the cultivated patches of ground, as *Cathormiocerus* (two species, one perhaps undescribed), and various *Hyperæ*, *Cymindis*, *Zabrus*, *Carabus*, and *Harpalus*. Sleeping one night at Guadalaviar, we again moved on early the next day *en route* for Albarracin, on foot as before, the greater part of the way lying over undulating arid districts till we descended abruptly to the fertile valley of the River Guadalaviar, at the village of Trama Castilla. Hence on to Albarracin, about nine miles distant, our route was along a fine, new road, wholly uninteresting from an entomological point of view, the last two miles or so through a very narrow, deep, winding gorge, at the mouth of which the town is situated, perched upon an eminence formed by an abrupt angle of the river, and completely barring the outlet. This new road, extending from near Teruel to the mining districts above Noguera, is carried straight under Albarracin by a tunnel, near the entrance to which we obtained lodgings at a house by the road-side, the "Posada Nueva," the proprietor of which, José Narro, knew something of entomology, having collected at times for Father Bernardo Zapater, who lived close by, and Herr Max. Korb of Munich, the Father himself, in spite of his great age, helping us in many ways. At Albarracin we remained till August 8th, making one long excursion, however, to Bronchales, in the Sierra, about fifteen miles distant, and sleeping there two nights. The most pro-

ductive localities in the vicinity of Albarracin were:— (1) The gorge of the Guadalaviar, about five miles down the Teruel road, and the adjacent savin-covered foothills of the Sierra; (2) the pine-forests on the ridges of the Puerto de Losilla, about the same distance off. On these lower hills we were fortunate enough to discover the fine Buprestid, *B. sanguinea*, F.,* and a new Capsid, belonging to the genus *Nasocoris*, Reuter, both on *Ephedra nebrodensis*, an *Equisetum*-like plant of the order Gnetaceæ. Here, too, we noticed various *Zonabris*, *Zonitis*, *Clytanthus*, *Coptocephala*, *Lachnæa*, *Clythra*, *Cryptocephalus*, and *Trichodes* (*S-punctatus*, F.), most of these resting on the spiniest plants; and, under stones, the large, crepitating *Aptinus displosor*, Duf., and divers *Ophonus*, *Steropus*, *Acinopus*, and many scorpions were to be seen. On the summit of the pine-ridge, at Puerto de Losilla, *Rhynchites cæruleocephalus*, Schall., and *Hispa testacea*, L., abounded on *Cistus* (the *Hispa* having been noticed by us in a similar way at Areachon, a fortnight or so earlier), and on the pines there were the usual *Scythropus*, *Magdalis*, *Pissodes*, *Spondylis*, and *Buprestis* (*S-guttata*, L.). Under large stones, at the same place, many small Coleoptera and Hemiptera were obtained, as *Rhytirhinus variabilis*, Bris., *Thylacites guinardi*, Duv., *Galeatus maculatus*, H.-S. (in the greatest profusion), *Acalypta*, *Agramma*, and a new *Piczostethus* allied to *P. cursitans*, Fall. Lower down, under stones, adjacent to the cultivated ground, we found various *Chrysonela*, *Timarcha*, *Cyrtonus*, and *Harpalus*, *Adimonia tanacetii* in abundance (as in most of the other places visited), etc.; and on ragwort and other flowers *Icbia erux-minor*, L., a *Malachius* or two, various Pentatomids, *Phymata*, etc. The streams hereabouts produced divers *Parnus*, *Potaminus*, *Elmis*, *Hydræna*, *Pæderus*, *Tachys*, and *Bembidium*. On this ridge of the Puerto de Losilla we also met with *Ercbia zapateri*, Oberth., in some numbers, and all in very fresh condition, on the last day of our stay at Albarracin. August 3rd—5th were spent at Bronchales, whence we travelled in a springless country-cart up the new road to as far as Noguera, the remaining five miles or so of the journey across the mountain-ridge being accomplished on foot. Here, as at Tragacete and Losilla, there was an abundance of pine-forest, and in the opener places the Umbelliferæ were in full flower, producing *Chrysanthia*

* Cf. *Trans. Ent. Soc. Lond.*, 1901, pp. 379-384, t. 13.

viridissima, *Leptura stragulata*, and *Strangalia pubescens*, in more or less abundance, as well as *Aemæodera*, and other species already noticed at Tragacete. On the pines, again, there were the usual *Buprestis*, *Brachyderes*, *Magdalis*, and *Crioccephalus*, and also *Prionus coriarius*, L., and *Elatér præustus*, F. By beating young trees in a marshy place we obtained *Lebia crux-minor*, *L. cyathigera*, and *L. cyanocephala*. Here, too, we had the pleasure of taking *Erebica zapateri* in numbers, the larva of *Graellsia isabellæ*, etc.

Leaving Albarracin, finally, on August 8th, our journey home was much accelerated by the new line of railway opened a few weeks before, from Teruel to Calatayud, one of the stations, Cella, being only about four hours distant, a long diligence journey, or a detour by the Mediterranean coast, being thus avoided. Of our wearisome railway journey from Calatayud, by way of Zaragoza, Pamplona, San Sebastian, etc., to the frontier at Hendaye, it is not necessary to speak, except to note the abrupt change from the arid districts of the interior to a very green and fertile region as the northern coast was approached.

The Teruel district, as noted by Mrs. Nicholl, has been much worked by Father Zapater, who has resided for many years at Albarracin, and Herr Korb, but as they are chiefly devoted to Lepidoptera, it is probable they have not paid very much attention to the beetles. So far as I am aware, no collected account of the Coleoptera of Cuenca or Albarracin has hitherto been published, and the following preliminary list of species met with by us may be of interest, though, as compared with what might be found a month earlier, it is no doubt very incomplete. The Hemiptera-Heteroptera are, of course, still less known, and a list of them is also appended.

The following species were captured, amongst others not yet identified* :—

[Tr. = Tragacete; Alb. = Albarracin; Guad. = Guadalaviar; Br. = Bronchales.]

COLEOPTERA.

Cicindela flexuosa, F., on the banks of streams, Cuenca; *C. campestris*, L., dark var., Br. *Carabus melancholicus*, F., and *C. rugosus*, F., under stones, Tr.; *C. latus*, Dej., Sierra

* I am indebted to MM. Bedel, Reitter, Schilsky, and Tschitscherine for assistance in naming some of the Coleoptera, and to Dr. O. M. Reuter and Mr. E. Saunders for their help with the Hemiptera.

Alta, Br., Tr., Guad., under stones, rare. *Omophron limbatus*, F., Cuenca (also seen at Toledo), on the sandy banks of streams. *Bembidium ibericum*, Pioch., in plenty in moss on stones in stream, and *B. punctulatum*, Drap., *B. stomoides*, Dej., ? etc., on its sandy banks, Tr. *Tachys parvulus*, Dej., on banks of stream, Alb. *Tachyta nana*, Gyll., under bark of pines, Tr. *Perileptus arcolatus*, Creutz., on banks of stream, Tr. *Platynus viridicupreus*, Goeze, under stones, Alb.; *P. scarpunctatus*, L., and *P. parumpunctatus*, F., marshy places, Tr., Br. *Synuchus nivalis*, Panz., and *Platyderus montanellus*, Graells, under stones, Tr. *Steropus insidiator*, Pioch., under stones, Tr., Alb., Guad., Uña; *S. sp. ?*, Guad. *Percus sp. ?*, Alb. *Pœcilus crenulatus*, Dej., Guad. *Orthomus hispanus*, Dej., Guad., Tr. *Amara equestris*, Duft., var. *zabroides*, Dej., Tr., Guad., Br., Uña; *A. acuminata*, Payk., Guad. *Zabrus spp. ?*, undetermined, Guad. *Acinopus picipes*, Oliv., under stones, not rare, Cuenca, Guad., Tr., Alb. *Aristus capito*, Dej., and *A. clypeatus*, Rossi, under stones, Cuenca, Tr. *Ophonus sabulicola*, Panz., Guad.; *O. diffinis*, Dej., Alb.; *O. azureus*, F., Alb., Tr., Guad.; *O. cordatus*, Duft., Guad., Alb., Tr.; *O. rotundatus*, Dej., Cuenca. *Harpalus zabroides*, Dej., under stones and clods of earth, not rare, Tr. *Stenolophus teutonius*, Schr., Alb. *Anisodactylus binotatus*, F., Br., Tr. *Chlœnius martinæzi*, Ganglb., under stones, etc., on the dry hill-sides, not rare, Cuenca, Tr., Guad.; *C. nigricornis*, F., Guad. *Lebia cruz-minor*, L., var. *nigripes*, Dej., on flowers and by beating young trees, Alb., Tr., Br., Cuenca; *L. cyathigera*, Rossi, Br.; *L. turcica*, F., Cuenca; *L. rufipes*, Dej., Cuenca; *L. cyanoccephala*, L., Tr., Cuenca, Br. *Cymindis miliaris*, F., and *C. spp.*, under stones, Portillo de Guadalaviar, Tr., Alb., Br. *Aptinus displosor*, Duf., under stones on dry hill-sides, Alb. *Braconinus crepitans*, L., Br., Tr., Guad.

Deronectes bicostatus, Schaum, not rare, in small running stream, above Palomera, near Cuenca; *D. opatrinus*, Germ., with the preceding, and at Tragacete. *Hydroporus halensis*, F., *H. lepidus*, Oliv., with the preceding, Cuenca. *Agabus didymus*, Oliv., *A. chalconotus*, Panz., *A. guttatus*, Payk., *A. bipustulatus*, L., Tr. *Dytiscus marginalis*, L., Cuenca. *Haliplus badius*, Aubé, Cuenca. *Gyrinus urinator*, Ill., *G. natator*, Ahr., Cuenca. *Aulonogyrus striatus*, Aubé, Cuenca. *Orcetochilus villosus*, F., Tr.

Hydræna (2 sp.) and *Ochthebius* (3 sp.), Tr., Cuenca.

Potaminus substriatus, Müll., Alb., Cuenca. *Parnus*

nitidulus, Heer, Cuenca; and two other species, Alb., Tr., Cuenca.

Ocalea sp.?, in moss on stones in stream, in plenty, Tr. *Tachyusa balteata*, Er., *T. coarctata*, Er., and *Ischnopoda umbratica*, Er., on banks of streams, Cuenca, Tr. *Falagria thoracica*, Curt., Tr. *Placusa* sp.?, under pine-bark, Tr. *Pronomæa rostrata*, Er., Tr. *Emus hirtus*, L., in dung, Tr. *Staphylinus stercorarius*, Oliv., Guad. *Ocypus cyaneus*, Payk., Guad., *O. cupreus*, Rossi, Tr. *Acylophorus glabricollis*, Lac., not rare on the sandy banks of streams, Palomera, Cuenca. *Pæderus gemellus*, Kr.?, abundant on the banks of streams, Tr., Cuenca. *Scopæus* spp.?, Alb., Tr., Cuenca. *Stenus guttula*, Miill., Cuenca, Tr.; *S. bipunctatus*, Er., Cuenca; *S. ater*, Mann., Alb.; *S. filum*, Er., Tr. *Bledius* sp.?, Tr. *Ancyrophorus aureus*, Fauv., Tr.

Temnochila cærulea, Oliv., on fallen pines, or under bark of these trees, rare, Tr. *Dermestes aurichalceus*, Küst., abundant in the old nests of *Thaumatopæa pityocampa*, Schiff., on the branches of pines, Alb., Tr. *Attagenus piccus*, Oliv., on flowers, Uña, Cuenca, Alb.; *A. trifasciatus*, F., on flowers, Cuenca. *Orphilus niger*, Rossi, Tr. *Platysoma oblongum*, F., *Paromalus flavicornis*, Herbst, *Plegaderus sanatus*, Truqui, under pine-bark, Tr. *Hister sinuatus*, F., in dung, Tr. *Subcoccinella 24-punctata*, L., Cuenca. *Exochomus auritus*, Scriba, Br. *Coccinella 14-pustulata*, L., commonly by beating low plants, Tr., Br., Alb.; *C. doublicri*, Muls., Cuenca. *Mysia oblongoguttata*, L., on pines, Tr. *Hyperaspis reppensis*, Herbst, Tr.

Gymnopleurus flagellatus, F., on the roads, Tr., Alb. *Bubas bubalus*, Oliv., *Copris lunaris*, L., *Onthophagus schreberi*, L., in dung, Tr. *Aphodius carpetanus*, Graells, in profusion on one occasion in dung in the road (but overlooked at the time for the common *A. rufipes*, L.), Tr. *Anmæcius* spp., Lago de Uña, Tr. *Trox* sp., Alb. *Geotrupes lævigatus*, F., common, Alb. *Rhizotrogus pygialis*, Muls., not uncommon, flying in the hot sun, and variable in colour, Cuenca, Tr., Br.; *R. pini*, Oliv., Br.; *R. solstitialis*, L., var. *pineticola*, Graells, Br.; *R. rufescens*, Latr., Tr., Guad.; *R. tornosi*, Perez, Br. *Anoxia villosa*, F., Cuenca. *Chasmatopterus villosulus*, Ill., Alb. *Hoplia farinosa*, L., Cuenca, Alb. *H. philanthus*, Füssl., Tr. *Anisoplia bætica*, Er., not uncommon, and very variable in colour, Cuenca, Tr. *Cetonia oblonga*, Gory, common on thistles, Cuenca; *C. aurata*, L., *Oxythyrea stictica*, L., Cuenca.

Buprestis flavomaculata, F., common on felled pines, in the hot sunshine, Tr., Br., Losilla; *B. rustica*, L., and *B. octoguttata*, L., on pines, Tr., Losilla; *B. sanguinea*, F., not uncommon on *Ephedra nebrodensis*, between Albarracin and Gea. *Pecilonota* sp. ?, a single specimen of a large species allied to *P. rutilans*, F., picked up dead on the road in the town of Cuenca. *Anthaxia creesus*, Vill., Tr.; *A. hypomelana*, Ill., Cuenca; *A. confusa*, Lap., Tr.; *A. quadripunctata*, L., in pine-woods, on flowers and on logs, common, Tr.; *A. cichorii*, Oliv. ?, on flowers, Cuenca, Tr., Br. *Acnecodera taniata*, F., and *A. bipunctata*, Oliv., on flowers of Umbelliferae, Br., Tr. *Chrysobothrys solieri*, Lap., on cut pine-timber, Br. *Coræbus* spp., Tr., Cuenca. *Agrilus* sp. ?, Tr. *Throscus* spp., Cuenca. *Elatér præustus*, F., Guad., Br. *Cryptohypnus dermestoides*, Herbst, Tr. *Melanotus tenebrosus*, Er., Cuenca. *Cardiophorus rufipes*, Goeze, Cuenca. *Corymbites latus*, F., Tr. *Hydrocyphon australis*, Lind. ?, Cuenca. *Rhagonycha melanura*, Oliv., swarming on flowers, Uña, Tr. *Malthodes*, *Malachius*, *Attulus*, *Ebæus*, *Henricopus*, *Dolichosoma*, *Dasytes*, *Haplocnemus*, *Psilothrice*, various spp., not yet determined. *Thanasimus fornicarius*, L., Guad., Losilla. *Trichodes apivarius*, L., Tr., Alb., Guad.; *T. octopunctatus*, F., Tr., Br., Uña; *T. ammios*, F., common, Cuenca, Tr., Guad.; *T. leucopsideus*, Oliv., Guad., Br., Tr., Alb., common, and extremely variable in size, all four species on flowers, particularly of *Eryngium*. *Lasioderma læve*, Ill., Cuenca.

Tentyria spp., Cuenca, Guad. *Stenosis* sp., Alb. *Akis sansi*, Sol., common, Cuenca, about "stercore humano"; *A. sp.*? Alb. *Blaps gigas*, L., Cuenca. *Asida* spp., not determined, Tr., Cuenca, Alb., Guad. *Colpotus similaris*, Muls., Alb. *Heliopathes montivagus*, Muls., common under stones in dry places, Cuenca, Guad., Tr., Br.; *H. sp.*? Alb., Guad. *Microzoum tibiale*, F., under stones, Puerto de Losilla. *Pentaphyllus chrysomeloides*, Rossi, Uña. *Corticæus pini*, Panz., under pine-bark, Tr. *Helops* sp., Tr. *Menophilus cylindricus*, Herbst, under pine-bark, Tr. *Eryx ater*, F., Uña. *Omophlus ruficollis*, F., common, Cuenca, etc. *Lagria lata*, F., Alb., Br.; *L. hirta*, L., Cuenca, etc. *Scraptia dubia*, Oliv., common, by beating herbage, Cuenca. *Formicomus pedestris*, Rossi, Cuenca. *Notoxus trifasciatus*, Rossi, and *N. monocerus*, L., common on bushes by the Jucar, Cuenca. *Anthicus rodriguezii*, Latr., Tr.; *A. aubei*, Laf., Cuenca; *A. tristis*, Schmidt, Alb.; *A. instabilis*, Schmidt, Alb. *Mordella aculeata*, L.,

Br., Tr.; *M. fasciata*, F., Tr. *Mordellistena* and *Anaspis* spp., undetermined, Cuenca, etc. *Pentaria defarguesi*, Abeille (= *oberthuri*, Champ.), and *P. badia*, Rosenh., Cuenca. *Silaria trifasciata*, Chevr., Cuenca, Alb.; *S. brunnipes*, Muls., Br., Tr.; *S. varians*, Muls., Tr. *Emcnadia præusta*, Gebl., Tr.; *E. bimaculata*, F., Cuenca. *Meloe majalis*, L., not rare on hill-sides, Tr., Guad. *Zonabris quadripunctata*, L., *Z. variabilis*, Oliv., and various species, undetermined, some of them very abundant at Cuenca, Tragacete, etc. *Cerocoma mühlfeldi*, Gyll., locally abundant on flowers, Cuenca, Tr. *Zonitis præusta*, F., common on flowers of *Eryngium*, Guad., Tr., Cuenca, Alb.; *Z. mutica*, Scriba, Cuenca; *Z. sp.?* (near *Z. quadripunctata*, F., var. *korbi*, Esch.), Cuenca. *Edmera flavipes*, F., Tr.; *Æ. simplex*, L., Cuenca; *Æ. sp.?* Tr. *Chrysanthia viridissima*, L., common on umbelliferous flowers, in pine-forests, Br., Tr. *Mycterus curculionoides*, F., on flowers, with the preceding, Br., Tr., Alb.

Otiorrhynchus sp.? one specimen, under a stone, Portillo de Guadalaviar (the only representative of the genus met with). *Scythropus squamosus*, Kies., on pines, Tr. *Brachyderes suturalis*, Graells, abundant on pines, Tr., Guad., Losilla, Br.; *B. sp.*, Tr. *Cathormiocerus lapidicola*, Chevr.?, and *C. sp.n.?* under stones, Portillo de Guadalaviar. *Thylacites chalcogrammus*, Boh., under stones in dry places, not rare, Cuenca; *T. guinardi*, Duv., under stones, Losilla. *Cleonus ophthalmicus*, Rossi, Cuenca, Tr. *Lixus turbatus*, Gyll., Tr.; *L. cribricollis*, Boh., Cuenca. *Bubalocephalus rotundicollis*, Cap., a few specimens under stones, on high ground, Puerto de Losilla, Portillo de Guadalaviar, Tr. *Hypera hispanica*, Cap., and *H. sp.?* under stones, with the preceding, Guad., Tr. *Rhytirrhinus variabilis*, Br., under stones, Losilla, Guad. *Pissodes pini*, L., Br.; *P. notatus*, F., Tr., Losilla, Br. *Ceuthorrhynchus echii*, F., Cuenca, Tr.; *C. ferrugatus*, Perris, Losilla. *Baris nitens*, F., Cuenca. *Brachytemnus porcatus*, Germ., Tr. *Balaninus ochreatus*, Fahr., Tr. *Rhamphus flavicornis*, Clairv., Cuenca. *Magdalis memnonia*, Gyll. *M. frontalis*, Gyll., on pines, more or less common, Tr., Br., Losilla. *Cionus longicollis*, Bris., on *Verbascum thapsus*, Tr. *Apion wenckeri*, Bris., on *Cistus*, Losilla; *A. cyanescens*, Gyll., Br.; *A. atomarium*, Kirby, Tr. *Auletobius pubescens*, Kies., on *Cistus*, Br. *Rhynchites cæruleocephalus*, Schall., in profusion on *Cistus*, Puerto de Losilla; *R. curvatus*, Scop., Tr. *Trigonorhinus* (*Brachytarsus*)

areolatus, Boh. (= *pardalis*, Woll.), common, by beating herbage towards evening, females predominating, Cuenca. These specimens agree precisely with Wollaston's type of *T. pardalis*, which, to judge from his remarks (Col. Hesp., p. 139), was almost certainly obtained in Algeria, and not in St. Vincent, Cape Verdes, as stated. Boheman's insect was from Sicily, and his description appears to have been made from a rubbed individual. *T. areolatus* also occurs in Italy, but it has not, perhaps, been previously recorded from Spain. The structure of the head is so different from that of *Brachytarsus*, that Wollaston's generic name will have to be retained for this species. *Hylastes palliatus*, Gyll., *Crypturgus* sp., *Tomicus sexdentatus*, Boern., *T. laricis*, F., under bark of pines, Tr., *Pityogenes bidentatus*, Herbst, Uña.

Spermophagus cardui, Boh., common on flowers, Cuenca, Uña. *Spondylis byprestoides*, L., about pine-timber, and on wing towards evening, common, Tr., Cuenca, Uña, Alb. *Prionus coriarius*, L., Br. *Pachyta quadrimaculata*, L., Tr. *Leptura rubra*, L., sparingly, Br., Tr.; *L. unipunctata*, F., common, on *Eryngium* and other flowers, in open places, Tr., Cuenca, Guad.; *L. distigma*, Charp., on flowers of Umbelliferae, in pine-forests, rare, Tr., Br.; *L. stragulata*, Germ. (including var. *nigrina*, Schauf.), plentiful, with the preceding, and extremely variable in colour, Br., Tr., and also at Guad.; *L. sanguinolenta*, L., Tr., Br., etc.; *L. livida*, F., Tr. *Strangalia pubescens*, F. (including var. *holoscrieca*, Muls.), plentiful, in company with *L. stragulata*, and also varying to entirely black, Br., Tr.; *S. maculata*, Poda, Br.; *S. bifusciata*, Müll., Cuenca. *Hylotrupes bajulus*, L., Tr., Cuenca. *Crioccephalus rusticus*, L., on pine-stumps, Tr., Br. *Aromia moschata*, L., var. *thoracica*, Fisch., on willow, Tr. *Purpuricenus budensis*, Goeze, on Umbelliferae, etc., Uña, Cuenca. *Clytanthus verbasci*, L., rare, Alb.; *C. ruficornis*, Oliv., common, on flowers of *Eryngium*, etc., Tr., Alb., Cuenca. *Dorcadion* sp., not yet identified, three worn specimens, Tr., Muela de San Juan, Guad. *Monohammus gallo-provincialis*, Oliv., on pines, Tr. *Agapanthia* sp., Tr., Cuenca. *Phytæcia affinis*, Harrer, Br. *Oberca erythrocephala*, Schrank, Tr., Cuenca.

Donacia consimilis, Schrank, Tr.; *D. linearis*, Hoppe, Cuenca; *D. sp.* (near *impressa*, Payk.), Cuenca. *Lema puncticollis*, Curt., Alb.; *L. melanopa*, L., Cuenca, Alb., Uña. *Crioceris 12-punctata*, L., and *C. asparagi*, L., com-

mon, on asparagus-plants in the cultivated ground by the Huecar, Cuenca; *C. meridigera*, L., Cuenca. *Titubæa biguttata*, Oliv., Cuenca. *Lachnæa scarpunctata*, Scop., and *L. vicina*, Lac., Alb. *Clythra læviuscula*, Ratz., Alb. *Coptocephala scopolina*, L., Alb., Br., Guad., Cuenca. *Cryptocephalus scæmaculatus*, Oliv., Alb., Tr.; *C. bimaculatus*, F., Alb., Cuenca; *C. imperialis*, Laich., Guad.; *C. violaceus*, Laich., Tr.; *C. pini*, L., on the pines, Br.; *C. sp.?*, very near the preceding, but with a smooth thorax, also on the pines, not rare, Tr., Guad., Losilla; *C. moræi*, L., Tr.; *C. crassus*, Oliv., Cuenca; *C. pygmæus*, F., Tr., Cuenca; and various other species of the genus, not yet determined, mostly found on low plants in open places. *Pachybrachys spp.*, Tr. *Stylosomus sp.*, Alb. *Timarcha hispanica*, H.-S.?, in abundance, under stones on the edges of cultivated fields, Tr., Alb., Guad.; and other species as yet unidentified. *Cyrtonus cupreovirens*, Perez?, in plenty, and *C. denticulatus*, Chevr.?, rarely, under stones, Guad., Tr., Alb. *Chrysomela americana*, L., Cuenca; *C. grossa*, F., Tr.; *C. bætica*, Suffr., Alb., Cuenca; *C. analis*, L., Guad., Tr.; *C. hæmoptera*, L., Tr., Guad., Losilla; *C. menthastri*, Suffr., Tr., Cuenca, Uña. *Plagioderæ versicolora*, Laich., abundant on willow, Cuenca. *Phytodectæ ægrota*, F., Cuenca. *Galerucella luteola*, Müll., only too common on elms, Cuenca, Alb.; also seen at San Sebastian, on the north coast, on our way home. *Adimonia tanacetæ*, L., in abundance, under stones near cultivated ground, Tr., Br., Guad., Alb. *Malacosoma lusitanicum*, L., Tr. *Sermyla halensis*, L., Br., Tr., Alb. *Luperus sp.?*, a pallid form occurring in company with a similarly-coloured *Cryptocephalus*, on the pines, Tr. *Monolepta erythrocephala*, Oliv., Tr. *Haltica sp.*, in profusion on young poplars, by the Jucar, Cuenca. *Aphthona lævigata*, F., Cuenca. *Cassida equestris*, F., Br. *Hispa testacea*, L., in abundance on *Cistus*, Losilla; *H. atra*, L., Cuenca.

HEMIPTERA—HETEROPTERA.*

Odontoscelis fuliginosa, L., Tr.; *O. dorsalis*, F., Alb. *Odontotarsus grammicus*, L., Cuenca. *Eurygaster nigrocullata*, Goeze, Alb.; *E. maroccana*, F., Cuenca. *Ancyrosoma albolineatum*, F., Cuenca. *Graphosoma lineatum*, L., Cuenca. *Brachypelta aterrima*, Forst., Cuenca. *Schirus morio*, L., Tr.; *S. dubius*, Scop., Guad., Alb., Cuenca, Tr.

* The synonymy adopted is that of Puton's Catalogue, 1899.

Sciocoris sp. (near *umbrinus*, Wolff), Cuenca. *Dyrodere* *umbraculatus*, F., Cuenca. *Ælia acuminata*, L., Tr. *Stagonomus italicus*, Gmel., Tr. *Staria lunata*, Hahn, Cuenca. *Carpocoris varius*, F., Cuenca, Alb. *Dolycoris baccarum*, L., Cuenca, Alb. *Peribalus sphacelatus*, F., Cuenca, Alb. *Rhaphigaster nebulosa*, Poda, Br. *Holcogaster fibulata*, Germ., on pines, Tr., Losilla. *Eurydema festivum*, L., abundant on low plants, and varying greatly in coloration, the most dissimilar forms often seen in copulâ, Cuenca; *E. oleraceum*, L., Tr. *Zicrona cœrulea*, L., Cuenca. *Cyphostethus tristriatus*, F., Alb. *Phyllomorpha laciniata*, Vill., Alb., also seen at Toledo. *Centrocoris spiniger*, F., Alb., Cuenca. *Gonocerus juniperi*, H.-S., Cuenca. *Pseudophleus falleni*, Schill., Cuenca. *Corcus hirticornis*, F., Alb., Cuenca. *Camptopus lateralis*, Ger., Cuenca, Tr. *Alydus calcareatus*, L., Tr. *Stenocephalus agilis*, Scop., Tr.; *S. albipes*, F., Cuenca. *Therapha hyoseyami*, L., Cuenca, Tr., Alb. *Corizus crassicornis*, L., Tr.; *C. parumpunctatus*, Schill., Br., Tr.; *C. subrufus*, Gmel., Tr. *Neides tipularius*, L., Cuenca. *Megalomerium meridionale*, Costa, Lago de Uña. *Berytus signoreti*, Fieb.?, Alb. *Lygæus pandurus*, Scop., Cuenca; *L. equestris*, Tr.; *L. saxatilis*, Scop., Tr. *Cymus* sp., Cuenca. *Geocoris grylloides*, L., Tr. *Platyplax salviae*, Schill., Tr. *Microplax albofasciata*, Costa, Alb., Cuenca. *Macroplox fasciata*, H.-S., Alb. *Heterogaster urticae*, F., Tr., Cuenca. *Stygnocoris fuliginus*, Fourc., Alb. *Aphanus quadratus*, F., Alb.; *A. saturnius*, Rossi, Tr.; *A. ibericus*, Baer.?, Tr., Guad., Br. *Beosus muritimus*, Scop., Cuenca. *Emblethis* sp., Tr., Guad., Alb. *Pyrhocoris ægyptius*, L., Alb.; *P. apterus*, L., Cuenca. *Serenthia læta*, Fall., *Acalypta platychila*, Fieb., and *Galeatus maculatus*, H.-S., under large stones, on the summit of the pine-ridge, Puerto de Losilla, the last-mentioned in profusion. *Catoplatus carthusianus*, Goeze, Tr. *Monanthia echi*, Wolff, Cuenca. *Monosteira unicastata*, Muls. and Rey, Cuenca. *Phylloptocheila auriculata*, Costa, Cuenca. *Phymata crassipes*, F., Tr. *Hebrus pusillus*, Fall., Cuenca. *Velia currens*, F., Tr. *Gerris najas*, De G., Cuenca; *G. thoracicus*, Schum., Alb. *Reduvius personatus*, L., Tr. *Harpactor iracunulus*, Poda, Cuenca; *H. erythropus*, L., Tr.; *H. sanguineus*, F., Tr. *Coranus subapterus*, De G., Guad., Tr. *Nabis ferus*, L., Lago de Uña. *Piezostethus*, n. sp.,* not

* This species and the new *Nasocoris* will be described by Dr. O. M. Reuter in the Entomologist's Monthly Magazine.

uncommon, under stones, with *Galcatius*, etc., Puerto de Losilla; *P. cursitans*, Fall., under pine-bark, Tragacete. *Miridius pallidus*, Horv., Tr. *Phytocoris* spp., Br., Alb. *Adelphocoris seticornis*, F., Tr. *Brachycoleus triangularis*, Goeze, Cuenca. *Pachycyphus cæsareus*, Reut., not rare, on *Cistus*, Puerto de Losilla, Br. *Capsus scutellaris*, F., not rare, Tr., Cuenca, all the specimens having the scutellum rufous. *Liocoris tripustulatus*, F., Cuenca. *Pilophorus cinnamopterus*, Alb., Cuenca. *Lopus sulcatus*, Fieb., Alb., Cuenca. *Nasocoris*, n. sp., on *Ephedra nebrodensis*; the two described species of this genus are from Algeria and Southern Russia respectively. *Strongylocoris niger*, H.-S., Alb. *Mimocoris coarctatus*, Muls. and Rey, Cuenca. *Neocoris nigritulus*, Zett., Cuenca. *Calocoris sulphureus*, Reut.?, Cuenca. *Globiceps flavomaculatus*, F., Tr.

APRIL 14, 1902.

